## UNITED STATES DEPARTMENT of the INTERIOR

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"GERONIMO" MAKES NEW OCEANOGRAPHIC DISCOVERIES

The Interior Department's research vessel "Geronimo" has scored again-this time with the probable discovery of a new ocean current and the finding of
an unusual "hot spot" in the Atlantic Ocean off the coast of Ghana.

Geronimo, a converted sea-going tug, arrived at Washington, D. C., May 12 after a four-month oceanographic research cruise off the central west coast of Africa.

The Bureau of Commercial Fisheries vessel won scientific honors last September when she teamed up with Syncom II for the first transmission of oceanographic data via a communications satellite.

It was on that voyage, also off the coast of Africa, that scientists aboard the Geronimo got first indications of a westerly flowing undercurrent in the Gulf of Guinea.

Thomas S. Austin, director of the BCF laboratory at the Naval Annex in Washington, said test equipment dropped into the easterly flowing Guinea Current unexpectedly was pulled to the west at the end of long wires.

On the just completed voyage, the Geronimo went back to the area and obtained additional data which supports the probable existence of the current.

Austin said a current meter aboard the Geronimo did not function properly, but other measurements indicate that the undercurrent is from 50 to 80 feet below the ocean surface. No data have been obtained on the dimensions and velocity of the current, but Austin said further studies probably will be made in the fall or next spring.

The discovery of a new ocean current is relatively rare, with only a few having been found during the past 50 years, the BCF official added.

Oceanographer Paul N. Sund, who headed the scientific contingent aboard the Geronimo, said the ocean "hot spot" was found beginning about 30 miles southeast of Cape Three Points, Ghana, early in February.

The hot ocean area measured about 60 miles in diameter and extended to a depth of about 30 feet. The water temperature in the area was 88 degrees, six degrees hotter than the surrounding ocean.

Sund said the warmer area was virtually without motion and may have resulted from a surrounding counter-clockwise eddy.

The oceanographer said there was an unusually large concentration of tuna at one point on the edge of the hot spot. He said this apparently was associated with an adjacent upwelling of water from the ocean floor which brought nutrients to the surface.

The hot spot disappeared 10 days after it was discovered by the Geronimo. Sund said further study will be made in the area to learn if the heated water recurs. He said tuna fishing in the area of the discovery is traditionally good, and this may be related to a recurrence of the warmer sedentary water.

Geronimo's cruise was part of Equalant 3, an oceanographic study carried out by a number of nations participating in the International Cooperative Investigation of the Tropical Atlantic.

Other vessels which participated in the most recent study of ocean currents and fishery resources in the area off the African Coast were sponsored by the University of Miami and the Governments of Ghana, Congo-Brazzaville, Spain, Republic of Ivory Coast and the Soviet Union.

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